

14. (New) The appliance of claim 9, wherein one of the rocker arms is rotatably connected to a first end of the stop rod and wherein the other of the rocker arms is rotatably connected to an opposite end of the stop rod.

15. (New) The appliance of claim 14, wherein vertical movement of the pipetting-needle carrier results in rotational movement of the rocker arms with respect to the stop rod.

REMARKS

By this amendment, claims 7-15 are pending. Claims 12 and 13 have been withdrawn from consideration as being drawn to a non-elected invention. New claims 14 and 15 have been added to further define the invention.

In the outstanding Office Action of February 8, 2002, the Examiner objected to the specification as failing to provide proper antecedent basis for the claimed subject matter. Specifically, the Examiner stated that the terminology "traction drive" recited in claim 10 does not have support in the specification. Applicants respectfully disagree. The Examiner's attention is directed to page 3, lines 11-18 of the specification which state that it is well known in the art that forces can be transmitted in many different ways, including via a traction drive. Reconsideration is requested.

Claims 8-11 were objected to as being in improper form because they ultimately depended from canceled claim 1. Claims 8-11 have been amended to obviate the objection. Reconsideration is requested.

Claims 7-11 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for allegedly failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. The claims have been amended to

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

more particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Claims 7-11 were rejected under 35 U.S.C. § 102(b) as being anticipated by Abrams, U.S. Patent No. 4,807,425.

The Examiner asserts that Abrams discloses a device for opening and closing vials, the device including a cap opener 42 positioned relative to a rack conveyor which includes a plurality of vials and transports the vials along testing equipment including a pipette 38. Applicants respectfully disagree with the Examiner's characterization of the reference.

Amended claim 7 recites a combination including a plunger for engaging and releasing a catch on a reagent container stopper to be opened or closed, the plunger moveable between an at rest position and a working position, an automatic conveyor for moving the reagent container relative to the plunger, wherein the conveyor is movable in a first direction to place the plunger in a position to open the stopper, and wherein the conveyor is movable in a second direction, opposite to the first direction, to place the plunger in a position to close the stopper; and structure for translating movement of a pipetting-needle carrier to the plunger to cause movement of the plunger.

Abrams discloses a first piston 42 for opening a cap, and a second piston 78, downstream of the first piston, for closing the opened cap. Thus, the same piston is not used to open and close a cap, as required by claim 7. In addition, the rack conveyor which transports the vials moves the vials in a single direction for both opening and closing. Abrams does not disclose or suggest moving the vials in a first direction for opening the vials and moving in a second, opposite direction for closing. For at least

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Contact's table
of Vial 104
Bite

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

these reasons Abrams cannot anticipate claim 7 or claims 8-11 which depend from claim 7. Reconsideration is requested.

Claims 7, 8, and 10 were rejected under 35 U.S.C. § 102(b) as being anticipated by Shinohara et al., U.S. Patent No. 4,455,280.

The Examiner asserts that Shinohara et al. discloses a device and method for opening and closing vessels. The Examiner states that the device includes a cap opener 23 positioned relative to a reagent carousel 15, the carousel including a plurality of vessels and transporting the vessels into position for pipetting. The Examiner also states that the plunger 23 is rotated into and out of contact with a catch 22 of the cap, and a controller produces a synchronizing signal to actuate a rotary solenoid to rotate plunger 23 against catch 22.

Amended claim 7 recites a combination including a plunger for engaging and releasing a catch on a reagent container stopper to be opened or closed, the plunger moveable between an at rest position and a working position, an automatic conveyor for moving the reagent container relative to the plunger, wherein the conveyor is movable in a first direction to place the plunger in a position to open the stopper, and wherein the conveyor is movable in a second direction, opposite to the first direction, to place the plunger in a position to close the stopper; and structure for translating movement of a pipetting-needle carrier to the plunger to cause movement of the plunger.

Shinohara et al. does not disclose or suggest a structure for translating movement of a pipetting-needle carrier to the plunger to cause movement of the plunger as recited in claim 7. Shinohara et al. discloses an apparatus in which a container is rotated into a desired position. Once the container is in position, a signal is sent to

No structural elements are disclosed

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

Controller
translates the
movement to
the plunger!

actuate a lever 23 to engage a catch 22, thereby opening the container. After the container is opened, the probe moves for the first time, to enter the container and aspirate a sample, and the probe is then withdrawn from the container. Subsequently, the lever disengages from catch 22, returning to its original position due to a spring 28, and allowing the container to be closed. See column 4, lines 6-30. Thus, movement of the plunger is actuated/dependent upon positioning of the container and not on movement of the pipetting-needle carrier. Shinohara et al. is entirely silent as to any structure which translates movement of the pipetting-needle carrier to the plunger to cause movement of the plunger. For at least this reason, Shinohara et al. cannot anticipate claims 7, 8, and 10. Reconsideration is requested.

Claim 7 was rejected under 35 U.S.C. § 102(e) as being anticipated by Bienhaus et al., U.S. Patent No. 5,846,489.

The Examiner asserts that Bienhaus et al. discloses a system for opening closures of vessels including a robot having an arm containing an automatic pipetting unit and another arm containing an opening and removal device, the arms being controlled by a mutual controller and being positioned above a vessel rack.

Bienhaus et al. does not disclose or suggest structure for translating movement of a pipetting-needle carrier to the plunger to cause movement of the plunger. Bienhaus et al. is completely silent as to any relationship between movement of the pipetting needle and movement of the plunger. For at least this reason, Bienhaus cannot anticipate claim 7. Reconsideration is requested.

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com


In view of the foregoing amendments and remarks, Applicant respectfully requests the reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: August 8, 2002

By: 
Elizabeth M. Burke
Reg. No. 38,758

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

APPENDIX TO AMENDMENT OF AUGUST 8, 2002

VERSION WITH MARKINGS TO SHOW CHANGES MADE

AMENDMENTS TO THE CLAIMS

7. (Amended) An appliance for opening and closing reagent container stoppers in partially or fully automatic analysis apparatus, comprising:

a plunger for engaging and releasing a catch on a reagent container stopper to be opened or closed, the plunger moveable between an at rest position and a working position;

an automatic conveyor for moving the reagent container[s] relative to the plunger, wherein the conveyor is movable in a first direction to place the plunger in a position to open the stopper, and wherein the conveyor is movable in a second direction, opposite to the first direction, to place the plunger in a position to close the stopper; and

structure for translating movement of a pipetting-needle carrier to the plunger to cause movement of the plunger.

8. (Amended) The appliance of claim [1] 7, wherein the structure for translating movement includes means for moving the plunger in a downward direction in response to [translated] movement of the pipetting-needle carrier [is] in an upward [movement] direction.

9. (Amended) The appliance of claim [2] 8, wherein the structure for translating movement includes two rocker arms and a stop rod, the stop rod being connected to and positioned between the two rocker arms, the stop rod also being

connected to the pipetting-needle carrier, such that the stop rod moves with the pipetting-needle carrier.

10. (Amended) The appliance of claim [2] 8, further comprising a traction drive for moving the pipetting-needle carrier.

11. (Amended) The appliance of claim [10] 7, wherein the structure for translating movement includes a thrust plate and a catch member, wherein the thrust plate is engagable with the plunger, and wherein the catch member is connected to a means for driving the pipetting-needle carrier, such that movement of the pipetting-needle carrier in a first direction results in movement of the catch member and thrust plate in a second direction opposite the first direction.

FINNEGAN
ENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
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www.finnegan.com